on separate sheets of paper. A complete listing of all the claims is attached as well.

Having regard to the alleged obviousness of his invention, Applicant respectfully refers to his amendment of 23 November 2006 and to the amendment of claims 20, 22 and 39 set forth *supra*. None of the prior art of record teaches the combination of operational steps set forth in claim 20 now augmented by the additional step of selective deceleration of the heavy ions.

It is urged that the instant application as hereby amended is in condition for allowance which is courteously solicited.

Respectfully submitted,

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Enclosures

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application No.: 10/520,366

New Claims (15 October 2007)

Claims 1 - 19 canceled.

20. (Currently amended) A method of processing a surface of a dielectric carrier material to adapt it for securely attaching thereto a cover layer by precipitation, comprising the steps of:

irradiating the surface at predetermined influx angles by at least one beam of high energy heavy ions of predetermined density and energy dissipation to generate within the carrier material a first plurality of latent ion traces extending into the carrier material to a predetermined depth and at a predetermined influx angle and a second plurality of latent ion traces substantially similar to and intersecting the latent ion traces of the first plurality;

selectively decelerating the heavy ions for preventing the permeation thereof through the dielectric material; and

subjecting the ion traces of the first and second plurality to a chemical etching process for forming recesses extending from the surface to within the carrier material at an aspect ratio of A from about ≥3 to about 4 and whereby two or more of such recesses intersect below the surface to form common chambers.

21. (New) The method of claim 20, further including the step of collimating the at least one beam.

22. (Currently amended) The method of claim 21, further including the ~~steps~~ step of blocking at least part of the at least one beam ~~and of selectively decelerating the ions~~.

23. (New) The method of claim 22, further including the steps of placing a mask into the irradiation beam and of passing the carrier material through the beam at least once.

24. (New) The method of claim 20, wherein the carrier material comprises a polymeric film moved between dispensing and take-up rollers over a deflection roller in a path of substantially inverted V-shaped configuration.

25. (New) The method of claim 24, wherein the at least one beam of heavy ions impinges the surface of carrier material at opposite sides of the deflection roller.

26. (New) The method of claim 25, wherein the inclination of the carrier material at opposite sides of the deflection roller corresponds to the predetermined influx angle.

27. (New) The method of claim 25, further including the step of mounting a mask over the deflection roller into the beam of heavy ions.

27. (New) The method of claim 20, wherein the influx angle measures between 30° and 70°.

28. (New) The method of claim 20, wherein the carrier material is a polymeric film selected from the group consisting of polyimide, polyethylene teraphthalate and polyester.

29. (New) The method of claim 20, wherein the polymeric material is of a thickness from about 23 μm to about 50 μm.

30. (New) The method of claim 20, wherein the layer is a metal selected from the group consisting of copper and aluminum.

31. (New) The method of claim 20, wherein the chemical etching is carried out in a solution of NaOH.

32. (New) The method of claim 20, wherein the heavy ion beam is one of a $^{84}Kr^{+}$krypton beam and a $^{40}Ar^{+}$argon beam set at a radiation density of $5 \cdot 10^{7} cm^{-2}$.

33. (New) The method of claim 32, wherein the impact energy of the $^{84}Kr^{+}$krypton beam ions on the carrier material is set at 1.2 MeV/amu to result in a medium penetration depth of about 20μm.

33. (New) The method of claim 33, wherein the chemical etching results in recesses of a diameter of about 2 μm and a depth of about 18-19 μm.

34. (New) The method of claim 33, further including the steps of sputtering a seed layer of copper of a thickness of from about .2 to about .4 μm onto the surface and into the recesses followed by a galvanic precipitation of a layer of copper.

35. (New) The method of claim 34, wherein the seed layer is of a thickness of from about .2 μm to about .4 μm thickness and the copper layer is of a thickness of from about 5 μm to about 140 μm.

36. (New) The method of claim 32, wherein the impact energy of the $^{40}Ar^{+}$argon beam ions on the carrier material is set at .11 MeV/amu to result in a medium penetration depth of about 7 μm.

37. (New) The method of claim 36, wherein the chemical etching results in conical recesses of a depth of about 7 μm and an opening diameter of from about 1.9 μm to 2.1 μm.

38. (New) The method of claim 37, further including the step of precipitating, by vacuum deposition at an operating pressure of about □ $1 \cdot 10^{-1}$ mbar a layer on the surface of the carrier material.

39. (New) A system for processing a surface of a dielectric carrier material to adapt it for securely attaching thereto a cover layer by precipitation, comprising:

means for placing the dielectric carrier material in a predetermined position;

means for generating at least one beam of high energy heavy ions along a predetermined path;

means for directing the ions into the carrier material through one surface thereof to form intersecting latent ion traces therein any at least two of which being ~~dapted~~ adapted to be etched into a common volume;

means mounted between the source and the dielectric carrier material for selectively blocking at least a portion of the beam; and

means mounted between the source and the means for blocking for selectively decelerating the ions.